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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/463,851	06/05/2000	HANS ACHENBACH	A32964PCT/U	6879

21003 7590 09/10/2002

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EXAMINER
PATTEN, PATRICIA A

ART UNIT	PAPER NUMBER
1651	

DATE MAILED: 09/10/2002 22

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/463,851	ACHENBACH, HANS	
	Examiner	Art Unit	
	Patricia A Patten	1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *03 July 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *53,57,59,60 and 63-70* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *53,57,59,60 and 63-70* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Continued Prosecution Application

The request filed on 7/3/2001 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/463,851 is acceptable and a CPA has been established. An action on the CPA follows.

Claims 54-56, 58, 61-62 and 71 were canceled in Paper No. 9.

Claims 53, 57, 59-60 and 63-70 are pending in the application.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

Claims 65-70 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants have amended the composition claims to include the limitation 'organic solvent' extract. However, it remains unclear what extract Applicants intend to claim. It has already been established that organic solvent extracts of *A.taliscana* were known in the art as evidenced by the previous Office Action dated 1/4/01. Applicant contends that the organic solvent extract of the present invention *does not* contain aristolochic acid which was known to be a component of the organic solvent extracts of the past. Thus, does Applicant intend for each respective compound present in the fractions which did not contain aristolochic acid to be an 'extract' of *A.taliscana*? It appears that there were many fractions collected, and each *could* be called an 'extract.' In the Instant case, as will be discussed *infra* under the 35 U.S.C. 102(b) rejection, Applicant has claimed a product which is presumed to be different from the prior art product, but is prepared by the *identical process*. Thus, the claims are confusing in that the ordinary artisan would not know if they are infringing upon the patent because the metes and bounds of the term 'organic solvent extract' appear to be contradictory to what is known in the art. Applicant is asked to recite the missing steps in the method which will more fully define what they mean by the term 'extract,' including, if necessary, fractionation steps.

Claims 53, 57-60 and 63-64 remain rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method for inhibiting plant fungal growth *in-vitro* or inhibiting mutagenesis in a microorganism via administration of an organic solvent

extract of *Aristolochia taliscana*, does not reasonably provide enablement for a method for inhibiting mutagenesis or inhibiting fungal growth in any organism such as mammals.

Applicant's arguments were fully considered but not found persuasive.

Applicant's principal argument resides in the contention that the Ames test, which was carried out with the *A. Taliscana* extract of the Instant invention, is a clear indicator of the efficacy of the extract with regard to mutagenesis in 'organisms.' The term 'organisms' is broad enough to encompass all other living creatures such as mammals which would include humans. The Ames test is routinely used in the art to identify mutagenic substances via a protocol which plates these substances with microorganisms and assess the observed changes of the microorganism which can be linked to mutagenesis. In the Instant specification, Applicants have relied on the Ames test as a method for assessing whether known mutagenic compounds are mutagenic toward microorganisms in the presence of an organic solvent extract of *A. Taliscana.* Applicants have clearly shown that some of the compounds isolated from the extract were effective in inhibiting 2-nitrofluorene and 2-amino-anthracene mutagenesis toward *S.typhimurium* strain TA 100 (p.33 Instant specification).

Again, the claim is drawn to a method for inhibiting *any* type of mutagenesis in *any* organism. Applicants have shown that the benzene extract will inhibit *two* mutagens which are known mutagens to *one* bacterial species of microorganism. Applicants have not established a clear nexus between the inhibition of these two mutagens and the inhibition of any other known mutagens known in the art. Subsequently, there are a myriad of substances which are known

mutagens to both bacteria and mammals alike which Applicants have not shown to be inhibited by the extract of the Instant invention. Considering the enormity of scope, these mutagens and one bacterial species are not considered representative of the *countless mutagens and bacterial species which are known in the art*. Bacteria used in Ames testing are standardized in order to measure a certain mutagenic (revertant) frequency, and therefore are typically specifically selected unique strains. The biochemistry of mammals vastly different than the biochemistry of bacterial cells, and thus, the Examiner cannot conclude that assessment of inhibition of mutagenesis using the Ames test model which uses specifically selected, unique strains of bacteria can be extrapolated to inhibition of mutagenesis *in-vivo* in mammals:

The efficacy of a drug treatment *in vivo* faces unfavorable obstacles not present in *in-vitro* models. As such, *in vivo* utility necessarily involves unpredictability with respect to physiological activity of an asserted process in humans. See discussion in Ex parte Kranz, 19 USPQ 2d 1216, 1218-1219 (6/90). For examples, drug delivery to the target area must survive the acidic environment of the stomach if administered orally. Additionally, the delivery of the drug across necessary cell surfaces in amounts needed to be efficacious, but not lethal to the subject, necessitates sensitive testing in order to adequately determine the proper human dosage. Thus, although the Ames test may be a good indicator of what may be a potential mutagen *in-vivo* it is not provide a direct correlation to what may be considered as an inhibitor of a mutagen *in-vivo*. The mechanism of inhibition of the extract appear to be unknown and undiscovered as of yet. The effectiveness of the extract of the Instant invention *in-vivo* in any other living

creature besides Salmonella has not been scientifically demonstrated in the Instant specification as filed and thus, is not found convincing.

Secondly, Applicant argues that the Wickware reference does not support the rejection made under enablement with regard to 'fungal infections' and cite several references which are clear proponents of acceptance of the *in-vitro* model for *in-vivo* extrapolation which were fully considered. In this respect, the Examiner has removed this particular embodiment of the rejection because an *in-vitro* success with regard to inhibition would seem to have some success *in- vivo* as evidenced by the references. However, the Instant specification has shown that the extract was inhibitory toward *B.cinerea, R.solani* and *S.asterophora* for example. It is deemed that the extracts may work *in-vivo* with regard to these specific strains of fungus. However, it is noted that the fungal strains listed *supra*, are not known fungal pathogens in mammals, rather, they are *plant funguses*. Applicants have not provided *any indication* that the extract of the Instant invention would work successfully *in-vitro* or *in-vivo* on known pathogenic fungus which infect mammals such as Candida. Candida fungal infections are difficult to treat and compositions for such are rare. Treatments for such pathogenic fungal species would necessarily need to provide for definitive evidence of efficacy. The Instant specification lacks such evidence and therefore does not meet the criteria set forth in 35 U.S.C. 112 First paragraph.

In re Fisher, 427 F.2d 833, 166 USPQ 18 (CCPA 1970), held that

"Inventor should be allowed to dominate future patentable inventions of others where those inventions were based in some way on his teachings, since such improvements while unobvious from his teachings, are still within his contribution, since improvement was made possible by his work; however, **he must not be permitted to achieve this dominance by claims which are insufficiently supported and, hence, not in compliance with first paragraph of 35 U.S.C. 112**; that paragraph requires that scope of claims must bear a reasonable correlation to scope of enablement provided by specification to persons of ordinary skill in the art; in cases involving predictable factors, such as mechanical or electrical elements, a single embodiment provides broad enablement in the sense that, once imagined, other embodiments can be made without difficulty and their performance characteristics predicted by resort to known scientific law; in cases involving unpredictable factors, such as most chemical reactions and physiological activity, scope of enablement varies inversely with degree of unpredictability of factors involved." (emphasis added).

Accordingly, in the present instance, the claimed invention encompasses treatments for veritable plethora of possible fungal pathogens and mutagens. The inadequate disclosure coupled with a lack of representative examples and the art recognized unpredictability preclude the use of the Arisolochia extract within the scope of the presently claimed invention by the skilled artisan without undue experimentation. This

undue experimentation would be practiced without a reasonable expectation of success as evidenced *supra.*

Claim Rejections - 35 USC § 102

Claims 65-70 remain rejected under 35 U.S.C. 102(b) as being anticipated by de la Parra (US 4,782,077) for the reasons set forth in the Office Action dated 1/4/01. Applicant's arguments were fully considered but not found persuasive: Applicants argue, and claim that the organic solvent extract is substantially free of aristolochic acids and thus the product is different from the product obtained by de la Parra, however:

In view of **In re Sussman, 141 F. 2d 267, 60 U.S.P.Q. 538 (CCPA 1944)**, the claims are rejected under 35 U.S.C. 102 (b) as well as 35 U.S.C. 112, first and second paragraph, "that since the steps are the same, the results must inherently be the same unless they are due to conditions not recited in the claims." In the particular case, Applicant(s) is (are) claiming an invention employing the **same process steps** but the product(s) is(are) **alleged to be different**. Applicant is required to recite the missing steps to form the alleged different product(s) in view of the above cited decision.

It is deemed that the organic solvent extract will inherently contain aristolochic acid unless further separated by means which are not claimed. It is suggested that Applicants

recite the composition claims in product-by-process form to include the steps which actually *exclude* the aristolochic acid from the final product.

Claims 53 and 55-64 remain free of the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Patricia Patten, whose telephone number is (703)308-1189. The examiner can normally be reached on M-F from 9am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn, can be reached on (703) 308-4743. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-4242.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Jon P. Weber, Ph.D.
Primary Examiner